

IN THE CLAIMS:

As two sets of claims were filed in the application, please cancel unamended Claims 1-34 without prejudice leaving the second set of Claims 1-34 (as amended by pre-amendment) pending. Please replace pending Claims 3-5, 10, 14 and 27 with the following amended Claims 3-5, 10, 14 and 27:

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3. Method as claimed in claim 2, comprising storing said information in said cache server.

4. Method as claimed in claim 3, comprising storing said information in said cache server only if said content provider is located outside said region.

5. Method as claimed in claim 3, comprising storing said information in said cache server only if said content provider is located inside said region.

10. Method as claimed in claim 1, comprising only distributing said information based upon the outcome of a rule determining, for each derived piece of information, whether or not the derived piece of information is to be distributed to said set of geographically distributed cache servers.

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14. Internet caching system, comprising:
a set of geographically distributed cache servers, each cache server serving a different region wherein each region has a common relation;
means for deriving Internet information derived in connection with the operation of one of said cache servers; and
means for distributing said derived information to essentially all of said cache servers.

27. Internet cache server arranged in a geographical region to primarily serve users in that region, comprising:

means for deriving information sent by an Internet content provider to an end user located within said region as a result of an information request made by said end user; and

means for distributing said information to a set of geographically distributed cache servers, said servers preferably serving substantially different local geographical regions within an area having a common relation.

Please add the following new Claims 35-43 which read as follows:

35. (New) A method for caching content in a distributed computing network comprising the steps of:

receiving an information request seeking a content, the information request being from an end user to a content provider;

determining if the content is locally cached;

providing the content to the end user if the content is locally cached;

providing the information request to the content provider if the content is not locally cached;

deriving the content sent from the content provider in response to the information request; and

distributing the content to a set of cache servers, each cache server serving a substantially different region wherein each region has a common relation.

36. (New) A method as recited in Claim 35, further comprising the step of applying at least one rule to the distribution of the content.

37. (New) A method as recited in Claim 36, wherein the at least one rule is caching only content with a specific communication format.

38. (New) A method as recited in Claim 36, wherein the at least one rule is caching only content from ".com" and ".org" address extensions.

39. (New) A method as recited in Claim 36, wherein the at least one rule is caching only content stored outside the region.

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40. (New) A method as recited in Claim 35, wherein the common relation is a culturally defined area.

41. (New) A method as recited in Claim 35, wherein the common relation is a linguistically defined group of end users.

42. (New) A method as recited in Claim 35, wherein the common relation is a location within a national boundary.

43. (New) A method for caching content in a distributed computing network comprising the steps of:

receiving a message;

determining if the message is an information request seeking a content, the information request being from an end user to a content provider;

sending the message to the distributed computing network without effect if the message is not an information request;

determining if the content is locally cached when the message is an information request;

providing the content to the end user if the content is locally cached;

providing the information request to the content provider if the content is not locally cached;

monitoring the content sent from the content provider in response to the information request; and

distributing the content to a set of cache servers, each cache server serving a substantially different region wherein each region has a common relation.



REMARKS

Reconsideration of the above identified application in view of the preceding amendments and following remarks is respectfully requested.

Claims 1-43 are pending in this application. By this Amendment, Applicants have amended Claims 3-5, 10, 14 and 27. New Claims 35-43 have been added by this amendment. The claim amendments were made to more precisely define the invention in accordance with 35 U.S.C. 112, paragraph 2. These amendments have

not been necessitated by the need to distinguish the present invention from any prior art. It is respectfully submitted that no new matter has been introduced by these amendments, as support therefor is found throughout the specification and drawings.

Applicant's representative would like to thank Examiner Parton for the courtesies extended during our telephone conversations on January 22, 2003 in which we discussed the two pending sets of claims. We agreed that the set amended by the Preliminary Amendment filed with the application are the proper set to be examined. Accordingly, this amendment has cancelled the duplicate set and, therefore, withdrawal of the rejection is respectfully requested.

In the Office Action, the abstract was indicated as absent. The subject addition of an abstract and substitute specification have addressed this and other informalities and withdrawal of the rejection is respectfully requested.

In the Office Action, Claims 1-34 were rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,787,470 to DeSimone et al. in view of U.S. Patent No. 6,243,760 to Armbruster et al.

DeSimone et al. disclose an inter-cache protocol. DeSimone et al. recognize that determining if an object is on the local cache may impart a delay to the retrieval process or retrieving a copy of an object from a local cache may result in an outdated object (col. 2, lns. 4-24). To overcome such undesirable results, DeSimone et al. teach a mechanism by which caches inform other caches about what objects are therein, i.e., each cache has different objects stored but each has the same update notification from the other caches. This update notification is distinct from actually sending the objects (col. 3, lns. 20-23). Hence, each cache simply knows what objects

the other caches have stored and how recently those objects were acquired. The motivation for this taught by DeSimone et al. is twofold. Firstly, minimal storage space is required on each cache because the cached object is not stored at each cache. Secondly, the separation of the object itself from its characteristics (such as size, freshness, etc.) allows determining whether or not to retrieve the object from the cache without actually having the object (col. 4, lns. 53-67 to col. 5, lns. 1-4).

Armbruster et al. disclose an information dissemination system. The system has a central cache complex 1 with a main function of storing cached pages and handling requests for cached pages that cannot be served locally. A subscribing Internet Service Provider (ISP) pays the system administrator a fee to connect to the central cache complex 1. Subscribing content providers 12 also pay the system administrator a fee to cache their material with the central cache complex 1. The content provider 12 determines what files are to be cached (col. 4, lns. 39-40) and uploads the files to the central cache complex 1 (col. 4, lns. 65-67). The content provider 12 also selects the distribution to the ISPs which may be based upon a page's community of interest. Hence, each content provider 12 selects a custom set of ISPs upon which to cache its material. The material may be distributed on a regional basis (col. 5, lns. 5-11) although the content provider's objective is to make the object available to all who would be interested in it.

It is respectfully submitted that one skilled in the art to which the subject invention appertains would not have been motivated to combine DeSimone et al. with Armbruster et al. as suggested by the Examiner. Turning to the MPEP, if the proposed modification or combination of prior art would change the principle operation of the prior

art being modified, then the teachings of the references are not sufficient to render the claim *prima facie* obvious (MPEP citing *In re Ratti*, 270 F.2d 810 (1959)). DeSimone et al. teach simply sending notification messages instead of the Web objects themselves (col. 4, lns. 53-55). The motivation of DeSimone et al. is to avoid the need to cache objects locally. This is a clear teaching away from the information dissemination system of Armbruster et al. in which the objects selected by the content providers are cached locally (col. 3, lns. 65-67 through col. 4, lns. 1-6). Consequently, to modify DeSimone et al. to cache objects locally, as what the system of Armbruster et al. does, would fundamentally change the principle operation of DeSimone et al. As a result, the advantages of DeSimone et al. are lost. Hence, rather than provide a motivation, teaching or suggestion to combine as required, the principle operation of DeSimone et al. would be changed if modified by the system of Armbruster et al. Accordingly, applicant's representative asserts that the combination is improper and should be withdrawn.

Furthermore, for the sake of argument, even if the references of DeSimone et al. and Armbruster et al. were combined as suggested by the Examiner, the claimed invention would not be obtained. There is nothing in either of these references that discloses, suggests or teaches, either alone or in combination, in whole or in part, a method for caching Internet information, comprising the steps of deriving information sent to an end user from an Internet content provider based upon an information request from the end user, and distributing the information to a set of geographically distributed cache servers as recited in Claim 1. As a result, the actual objects, i.e., the derived information, are cached in geographically distributed servers. If the two disclosures were combined as suggested by the Examiner, only the update notification of DeSimone et al.,

i.e., information related to cached objects, would be distributed to communities of interest.

Therefore, for at least these reasons, Claim 1 and each of the claims depending therefrom are not rendered obvious by the combination of references cited by the Examiner, and withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

Turning to amended Claim 14, there is nothing in either of the cited references that discloses, suggests or teaches, either alone or in combination, in whole or in part, an Internet caching system including a set of geographically distributed cache servers, each cache server serving a different region wherein each region has a common relation. The Internet caching system of Claim 14 also includes means for deriving Internet information derived in connection with the operation of one of the cache servers, and means for distributing the derived information to essentially all of the cache servers. As a result, objects are cached based upon being of interest to a region with a common relation rather than distributing objects to areas which may have an interest in the object as taught by Armbruster et al. Consequently, means are provided for deriving and distributing information in a manner not taught by the proposed combination. Therefore, for at least these reasons, Claim 14 and each of the claims depending therefrom are not rendered obvious by the combination of references cited by the Examiner, and withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

Turning to amended Claim 27, there is nothing in either of the cited references that discloses, suggests or teaches, either alone or in combination, in whole or in part, an Internet cache server arranged in a geographical region to primarily serve users

in that region, comprising means for deriving information sent by an Internet content provider to an end user located within the region as a result of an information request made by the end user and means for distributing said information to a set of geographically distributed cache servers, said servers preferably serving substantially different local geographical regions within an area having a common relation. Consequently, the Internet cache server of Claim 27 derives information and distributes it in a manner not taught by the proposed combination. Therefore, for at least these reasons, Claim 27 and each of the claims depending therefrom are not rendered obvious by the combination of references cited by the Examiner, and withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

Applicants have added new Claims 35-43 which are directed to additional patentable aspects of the subject invention. Consequently, Applicants respectfully submit that new Claims 35-43 patentably distinguish over the art of record, and allowance of these claims is respectfully requested.

In accordance with the 37 C.F.R. §1.121, the amended claims are appended hereto in a version which indicates the amendments. Any additional fees or overpayments due as a result of filing the present paper may be applied to Deposit Account No. 50-1631. It is respectfully submitted that all of the claims now remaining in this application, namely Claims 1-43, are in condition for allowance, and such action is earnestly solicited.

If after reviewing this amendment, the Examiner believes that a telephone interview would facilitate the resolution of any remaining matters the undersigned attorney may be contacted at the number set forth hereinbelow.

Respectfully submitted,

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